19WN040 Smart Postural Monitor for Elderly People

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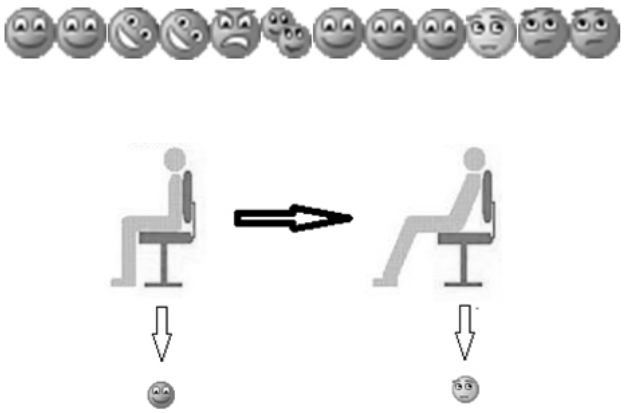
Efficient, low cost and easily deployable elderly people monitoring systems are becoming every day more important due to the always increasing average age of the populations all over the world. For elderly people, wrong postural behaviors can indicate a main and preliminary marker of malaise. It is possible to be made aware of this kind of problems developing smart home monitoring technologies: the body posture can be modeled using information resulting from specific low cost sensors built-in a bed or an armchair. This paper presents a low cost smartphone application for such application, able to transform a bed or an armchair into an intelligent device. A friendly interface has been defined in order to make this application also suitable for unskilled users.

Keywords: eldey people assistance, postural monitor, smart device, smartphone interface



Visual information by emoticon interface of an elderly person in sitting posture.

19WN059 Synchronization of DLMS/COSEM sensor nodes

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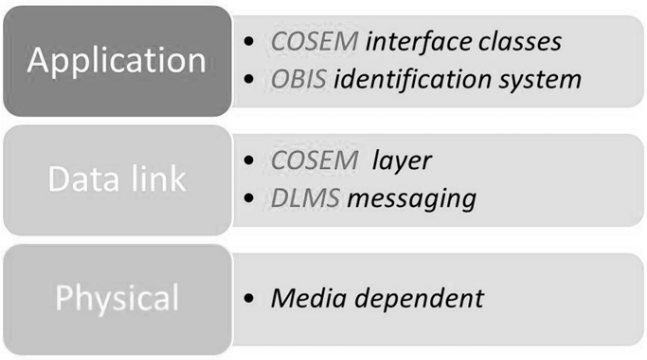
An AMI involves multiple heterogeneous devices, often produced by different manufacturers and which play different roles in the infrastructure, that need to communicate among each other. The DLMS/COSEM seems a good candidate to fulfill the requirement, being targeted to smart meters and supporting different communication channels. However the time resolution provided by the DLMS is in the order of hundreds of milliseconds: such resolution combined with an appropriate synchronization protocol could contribute to obtain measurements with sufficient resolution in time to make possible an accurate analysis of the power quality in customer's premises. In this paper, the authors will integrate the synchronization capabilities offered by DLMS with some synchronization protocols for WSN making comparisons and reporting on performances and applicability.



Protocol layout